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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,304	06/12/2008	Yoshio Ono	SAEG195.001APC	4542

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EXAMINER

CAMPBELL, THOR S

ART UNIT	PAPER NUMBER
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3742

NOTIFICATION DATE	DELIVERY MODE
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10/04/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
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Office Action Summary	Application No.	Applicant(s)	
	10/569,304	ONO ET AL.	
	Examiner	Art Unit	
	/Thor S. Campbell/	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/19/06, 6/29/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Chen (US 20070278204).

Chen discloses in reference to claim:

1. A hot air heater comprising heating wires **60** wound around an insulating fire-resistant substrate **50**, wherein a plurality of heating wires that are connected in parallel or series between an input line and an output line of an electric power supply line are wound around the insulating fire-resistant substrate in such a manner that current runs in opposite directions through the heating wires so as to cancel out electromagnetic waves generated from the heating wires. **See abstract.**
2. The hot air heater according to claim 1, wherein a first heating wire **60C** and a second heating wire **60B** are connected in parallel between an input line and an output line of an electric power supply line and are alternatively wound around the insulating fire-resistant substrate in the same direction such that current runs in opposite directions through the first and second heating wires so as to cancel out electromagnetic waves generated from the heating wires, and adjacent loops of the first and second heating wires have the same or substantially similar winding diameters.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 3, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen

Chen discloses substantially the claimed invention, except in reference to claim:

3. The hot air heater according to claim 1, wherein a ceramic honeycomb structure is disposed downstream of air heated by the heating wires. **The use of honeycomb flow conditioners in hot air heaters is well known and common knowledge in the art, of the Official Notice is taken.**

7. The hot air heater according to claim 3, wherein the ceramic honeycomb structure is disposed in the vicinity of the heating wires. **The use of honeycomb flow conditioners in hot air heaters is well known and common knowledge in the art, of the Official Notice is taken. Note: "in the vicinity" is not specific past what is well known.**

9. The hot air heater according to claim 2, wherein a ceramic honeycomb structure is disposed downstream of air heated by the heating wires. **The use of honeycomb flow conditioners in hot air heaters is well known and common knowledge in the art, of the Official Notice is taken.**

Claims 4, 5, 6, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Barris et al. (US 5053062).

Chen discloses substantially the claimed invention, except in reference to claim:

4. The hot air heater according to claim 3, wherein the ceramic honeycomb structure is furnished with a coating containing carbon powder, and the coated ceramic honeycomb structure has an emissivity of 0.8 or greater over the entire infrared wavelength region. Barris discloses the use of a honeycomb-like structure disc 56/66 having a high-emissivity carbon coating applied thereto in order that heat absorbed by disc can be readily reradiated. One of skill in the art would find it obvious to provide such a coating on the known flow conditioning honeycomb used in many such devices in order to reradiate the heat absorbed thereby. It would further be obvious to provide for the largest emissivity possible, including 0.8 and 0.9 or greater.

5. The hot air heater according to claim 4, wherein the coated ceramic honeycomb structure has an emissivity of 0.9 or greater over the entire infrared wavelength region. Barris discloses the use of a honeycomb-like structure disc 56/66 having a high-emissivity carbon coating applied thereto in order that heat absorbed by disc can be readily reradiated. One of skill in the art would find it obvious to provide such a coating on the known flow conditioning honeycomb used in many such devices in order to reradiate the heat absorbed thereby. It would further be obvious to provide for the largest emissivity possible, including 0.8 and 0.9 or greater.

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6. The hot air heater according to claim 4, wherein the coating containing carbon powder is created by impregnation. **The method of forming the coating is not a structural limitation and can not serve to distinguish over art sharing the claimed structural limitations.**

8. The hot air heater according to claim 3, wherein the ceramic honeycomb structure is coated with glassy carbon (See high-emissivity coating), *and the glassy carbon coating is formed by impregnating the ceramic honeycomb structure with resin containing glassy carbon and calcifying the impregnated ceramic honeycomb structure in a non-oxidizing atmosphere.* **The method of forming the coating is not a structural limitation and can not serve to distinguish over art sharing the claimed structural limitations.**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Thor S. Campbell/ whose telephone number is 571-272-4776.

The examiner can normally be reached on Mon, W-F 5:30AM-3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Thor S. Campbell/
Primary Examiner
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tsc